CONTENTS
VOLUME 83

AUBERT, ANNE-MARIE, JEAN MICHEL, AND RAPHAËL ROUQUIER. Correspondance de Howe pour les groupes réductifs sur les corps finis 353
BATES, S. M. AND A. NORTON. On sets of critical values in the real line 399
BIERSTONE, EDWARD, PIERRE D. MILMAN, AND WIESŁAW PAWŁUCKI. Composite differentiable functions 607
BORCHERDS, RICHARD E. AND ALEX J. E. RYBA. Modular moonshine II 435
BRYLINSKI, J.-L. AND D. A. MCLAUGHLIN. The geometry of degree-4 characteristic classes and of line bundles on loop spaces II 105
DELZANT, THOMAS. Sous-groupes distingués et quotients des groupes hyperboliques 661
FRIEDMAN, JOEL. Minimum higher eigenvalues of Laplacians on graphs 1
FUJIWARA, KOJI. The Laplacian on rapidly branching trees 191
GABBER, OFER AND FRANÇOIS LOESER. Faisceaux pervers ℓ-adiques sur un tore 501
GELFAND, SERGEI, ROBERT MACPHERSON, AND KARI VILONEN. Perverse sheaves and quivers 621
GUILLEMIN, VICTOR. Wave-trace invariants 287
GUO, JIANDONG. On the positivity of the central critical values of automorphic L-functions for $GL(2)$ 157
HOLT, JEFFREY J. AND JEFFREY D. VAALER. The Buerling-Selberg extremal functions for a ball in Euclidean space 203
HURTUBISE, J. C. Integrable systems and algebraic surfaces 19
KUO, HUNG-JU AND NEIL S. TRUDINGER. Positive difference operators on general meshes 415
LOESER, FRANÇOIS AND OFER GABBER. Faisceaux perverse ℓ-adiques sur un tore 501
MACPHERSON, ROBERT, SERGEI GELFAND, AND KARI VILONEN. Perverse sheaves and quivers 621
MCLAUGHLIN, D. A. AND J.-L. BRYLINSKI. The geometry of degree-4 characteristic classes and of line bundles on loop spaces II 105
MICHEL, JEAN, ANNE-MARIE AUBERT, AND RAPHAËL ROUQUIER. Correspondance de Howe pour les groupes réductifs sur les corps finis 353
MILMAN, PIERRE D., EDWARD BIERSTONE, AND WIESŁAW PAWŁUCKI. Composite differentiable functions 607
MINSKY, YAIR N. Extremal length estimates and product regions in Teichmüller space 249
NORTON, A. AND S. M. BATES. On sets of critical values in the real line 399
PAWŁUCKI, WIESŁAW, EDWARD BIERSTONE, AND PIERRE D. MILMAN. Composite differentiable functions 607
ROUQUIER, RAPHAËL, ANNE-MARIE AUBERT, AND JEAN MICHEL. Correspondance de Howe pour les groupes réductifs sur les corps finis 353

RUAN, YONGBIN. Topological sigma model and Donaldson-type invariants in Gromov theory 461
RUBERMAN, DANIEL. Relations among Donaldson invariants arising from negative 2-spheres and tori 645
RYBA, ALEX J. E. AND RICHARD E. BORCHERDS. Modular moonshine II 435
RYBKIN, A. V. On A-integrability of the spectral shift function of unitary operators arising in the Lax-Phillips scattering theory 683
SOFER, ADRIANA. p-adic interpolation of square roots of central values of Hecke L-functions 51
TOTARO, BURT. Tensor products in p-adic Hodge theory 79
TRUDINGER, NEIL S. AND HUNG-JU KUO. Positive difference operators on general meshes 415
VAALER, JEFFREY D. AND JEFFREY J. HOLT. The Buerling-Selberg extremal functions for a ball in Euclidean space 203
VILONEN, KARI, SERGEI GELFAND, AND ROBERT MACPHERSON. Perverse sheaves and quivers 621
YANG, TONGHAI. Cusp forms of weight 1 associated to Fermat curves 141